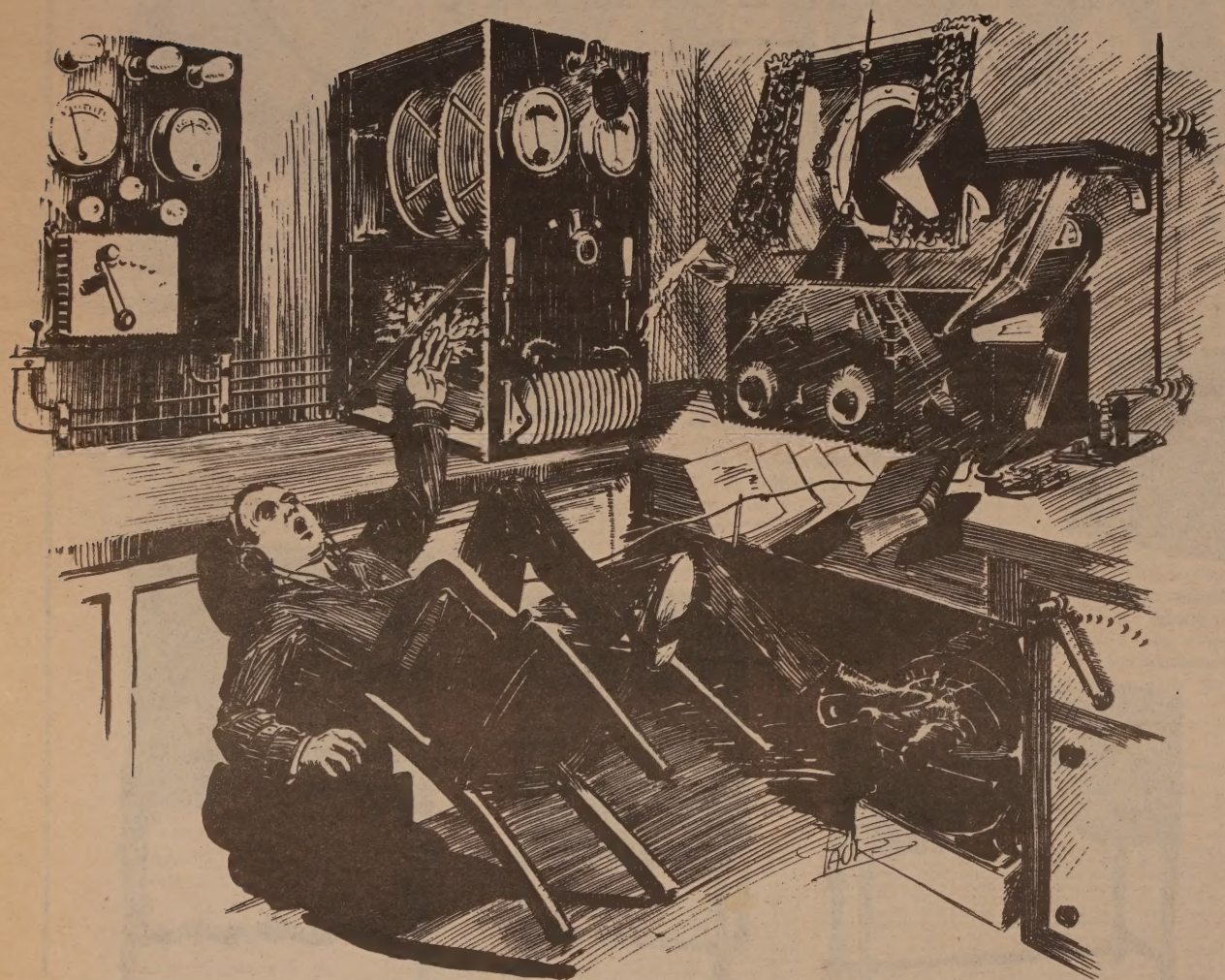


THE HORN SPEAKER

Radio News for April, 1923

C. W.

By WILLIAM A. GRIFFITH JR.



Catapulted, as it were, over the back of the Chair, he landed with his left leg across the brushes of the alternator. His flying arm came up abruptly against the condenser rack. A blinding flash and Perry lay inert, burned, bruised and silent.

THE music had been so fascinatingly "jazzy," and the girl so entertaining, and magnetic, that Perry, glancing at his watch, discovered he had danced away the entire last five hours of his eight hours of relief from duty. Now after the entrancing strains of "Tomorrow" had ended and Miss Merton had been shown safely to her stateroom, he dragged himself wearily to the radio

room of the *Palisades*. Henry Gray, second operator, glad to be relieved, laid down his phones, and turned to go. With one hand on the door-knob he called Perry's attention to a note on the table. "The 'Old Man' just phoned down for compass bearing, so you had better give Cape May a call the first thing. I failed to rouse them a couple of minutes ago." With a "good-night" Gray was gone. Perry thought of

the eight long hours of watch ahead as he reached sleepily over and threw in the D. C. switch. Pushing the automatic starter button, and sending a few preliminary EV's, he called Cape May at three intervals before he received an answer. After receiving their G.A., he began the monotonous MO MO MO MO. His thoughts wandered; he'd have a little phone music after his task was complete, glad

he'd struck a ship to work on equipped with a tube set. "Wonder what old WSB was filling the ether with on tonight's 'All-night ship at sea' program?" Finishing his MO's Perry reached for the cutout switch; as his hand was still hunting for it he was thrown violently backward. Catapulted, as it were, over the back of the chair, he landed with his left leg across the brushes of the alternator. His flying left arm came up abruptly against the condenser-rack. A blinding crash, and Perry lay inert, burnt, bruised and silent. A section of books over the table had been jarred off the shelf; they had landed on the key just as Perry had shorted the high voltage condenser circuit, and the low voltage alternator. His body had taken the full charge, and now lay on the floor in front of the 2-KW panel. The generator hummed merrily on and the books still lay on the key, but the gap was silent, the condensers blown.

Almost immediately the speaking tube, began to whistle shrilly, followed by a deep voice roaring through it, "Radio room, Sparks! Hey you, down there, wake up!" But Perry lay unconscious. A moment later the door burst open and the "Old Man" himself rushed in. He stopped short as he saw Perry sprawled on the floor. A mate following him in, dropped to his knees and felt Perry's wrist. "He still lives, sir," the mate replied to the captain's inquiring look. The captain spoke then for the first time since entering the room, "Get the other operator, Gray, at once, and then send the surgeon to look after this lad." The mate rushed off, the captain pulled a piece of paper from the rack, and wrote vigorously.

When Gray rushed in a second later the room was again empty, save for Perry still lying limp on the floor. Gray gave him no heed but went immediately to the table, and shoving the books from the key, picked up the captain's note. It read: "Call for help at once. We rammed a derelict and are dangerously crippled. In all probability will sink. Do not leave the radio room until I release you. Capt. O. S. B."

Gray turned from the table and pulled Perry away from the panel. As he turned back to the key the surgeon arrived, and knelt down beside the unconscious Sparks. As Henry Gray started to pound out S O S, he realized for the first time that the books had held the key down, and that the set was dead. Crossing to the panels he ascertained at once that the condensers were blown. "Dickens to pay now," he muttered, "but guess I can get the auxiliary set from the battery room installed in the rack in time to signal." As Gray stepped from the door on his way to the battery compartment, the lights on the ship glowed yellow, and suddenly were gone. A boat was just being lowered from its davits about 20' from where Gray stood. The shrieking women, the swearing seamen, and the darkness, broke Gray's nerve. As the lifeboat hit the water, Gray jumped from the rail — he had taken flight — the easiest

course for the moment—the coward's course always.

Failing to hear the crashing Sparks, the captain again came rushing into the radio room, flashlight in hand. "Where is that kid Gray? Why isn't he sending for help?" the captain demanded in a rage. The surgeon calmly looked up from his patient. "He just ran out of the door, and from the speed at which he left, I don't think he'll be back." "Well of all the hellish tricks—in ten minutes we are doomed, and you had better get the lad there into a life boat and stay with him," the captain, now cool again, told the surgeon. But Perry's eyes were open. He had caught the captain's words, "we are doomed!" The disabled boy whispered, barely audibly, "S O S will bring help; you send it, Cap!" As Perry closed his eyes the surprised captain fumbled for the key. He did know code; why shouldn't he send it? But his efforts were met with silence from the gap. Then he knew why Gray had deserted, for although the generator hummed steadily, on its auxil-

iary current, the set was useless. "Get out of here," he shouted, "save yourselves." The captain then rushed back to his post on the bridge, from which the mate, already aware of trouble in the wireless room, had rockets soaring skyward.

When the surgeon tried to move Perry, he again opened his eyes, and spoke, this time with more strength, "Help me to the table; not too late yet." His words were jerked out from weakness and pain. The surgeon, thinking that if they stayed longer it meant missing all possibility of gaining a boat, but always loyal to his ship, assisted Perry into the operator's chair. Assisted, did I say? Rather lifted him bodily, for poor Perry's right arm hung useless, and his legs were limp. Nevertheless, Perry reached for the key, and knew at once amidst the terrible hum and whirl in his aching head, that the set was *gone, worthless*. With his left hand he tore the connections from the key; he then connected the ground wire of his receiver to one post of the key and the other connection was made to the ground post of the tuner with

a piece of wire from the table drawer. Gasping for breath, his head rocking from side to side, the courageous Sparks turned up the already glowing vacuum tubes until a faint, almost imperceptible whistle came from the phones. Then, with his head almost laying on the table, and his left hand awkwardly grasping the key, he sent S O S S O S S O S DE NTK NTK NTK SINKING SINKING LAT 45°N LONG 66°W S O S, etc. How long he kept this up the watching surgeon, fascinated at this display of will power, and subconsciously aware that the tilt of the ship meant that only minutes were left, moved only when Perry fainted and slid to the floor. Then picking Perry up he plunged through the door and hurled himself and burden overboard! They were almost immediately picked up by a raft of sailors.

Several hours later Perry opened his eyes to find himself in a brightly lighted cabin, one of the Cunard liners, he later found. But all he cared about just then was the sweet voice, and the soft arms of Miss Merton as she sat beside him on the

lounge. The captain, standing at the head of the lounge leaned over and spoke, as he realized Perry had regained consciousness. "Lad, you saved a thousand lives tonight. Captain Milborn of this ship says they did not see our rockets, but that his first operator picked up your signals, quite weak but sufficiently loud for them to gain the necessary information which brought them to our aid. We have picked up all but one of the life-boats and rafts, and feel certain of finding the lost one shortly." Perry moved restlessly but quieted at once when Miss Merton smoothed his hair; the captain continued speaking, "Tell me, Sparks, how did you do it? The set was dead, for I tried it myself, and I know that no message was sent out after I left, for no one heard the crashing of the spark gap." "C. W.," murmured Perry wearily, "didn't think it was radiating—knew it had been done—took a chance," and his eyes closed. In spite of his aching bones and bad burns, he smiled as he sank into a deep sleep, for a smiling girlish face bending over him promised him days of joy to come.

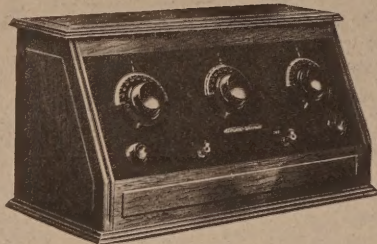
1925



Stewart-Warner Reproducer

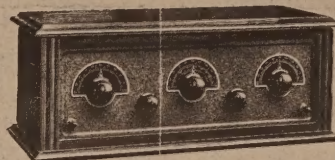
Model 400—Price, \$25.00
Model 405, \$19.50

Built and
Guaranteed
by
Stewart-
Warner



Stewart-Warner
Table Cabinet Radio

Model 305
Price, \$95.00 (without accessories)



Stewart-Warner
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Licensed Under
U. S. Navy
Patents.
5 Tube Circuit



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Model 410—Price, \$65.00

Built-in Reproducer, and storage space
for all batteries, but without instrument.



Stewart-Warner Console Radio

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Price \$285.00 (without accessories)



Stewart-Warner Console Radio

Model 310
Price, \$175.00 (without accessories)



Stewart-Warner Highboy Radio

Model 320
Price, \$450.00 (without accessories)

Prices Slightly Higher West of the Rockies

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Home Electrics

By G. L. HOADLEY, M. E.

THE cost of properly lighting a dwelling has been greatly reduced in the last few years. This is due largely to the introduction of the Tungsten filament lamp.

Computing the Cost of Domestic Lighting

crease in temperature the light is increased eleven per cent. The limiting temperature is the melting point of tungsten, but in commercial practise the filament is operated at a temperature considerably below

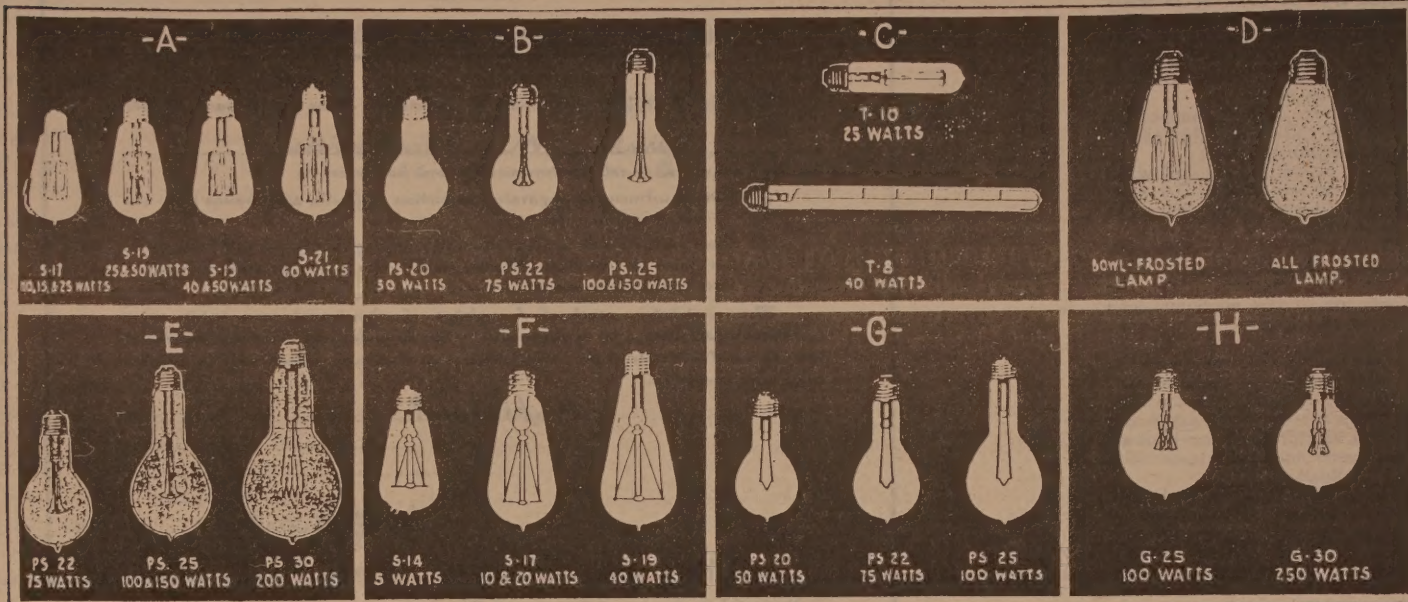


Fig. A, Shows Mazda B Lamps for 110 to 125 Volt Standard Lighting Service. B, Shows Mazda Type C or Gas Filled Lamps for 110 to 125 Volt Service. C, Illustrates Mazda B Lamps for Ornamental 110 to 125 Volt Lighting Service. D, Shows Two Types of Frosted Lamps. E, Shows Mazda "Daylight" Lamps, the Bulbs Being Made of Blue Glass to Produce a Light Similar to Daylight. F, Illustrates Mazda B Lamps for Use With Country Home Lighting Outfits of 28 to 32 Volts Potential. G, Shows Mazda C Lamps for Use On 28 to 32 Volt Country Home Lighting Outfits. H, Illustrates Mazda C Lamps Having Concentrated Filament, High Candle-Power Lamps for Stereopticon and Home "Movie" Projector Service.

This type of lamp in sizes of 10 to 60 watts or larger, glows in a vacuum just as did the old carbon lamp, for the same amount of power. The Mazda "C" lamp is gas-filled and gives out 4 to 5 times the amount of light the old carbon lamp gave. Credit for the modern Mazda lamp is due to the Research Laboratories of the General Electric Co., whose engineers discovered the way to make Tungsten ductile; that is, how to draw it into wire. Previous to this discovery, Tungsten lamps were manufactured and sold, but they were too delicate to withstand any jar or vibration, altho they were very efficient as compared to the old carbon type of lamp. The original Tungsten filament was made by mixing the Tungsten powder with a binder and then squirting it thru diamond dies, thus forming a thread which was reduced to pure Tungsten by burning out the binder. The modern filament is made by compressing Tungsten powder in a metal mould till the particles stick together and then nearly melting it by sending an electric current thru it; the billet thus formed is forged into a long wire about the size of a lead in a pencil. This wire is then repeatedly drawn thru diamond dies smaller and smaller in size, to the following diameters:

	watts	volts	thousandths of 1 inch
Mazda B.....	25	110	1.16
Mazda B.....	50	110	1.82
Mazda C.....	500	110	7.92
Carbon	50	110	4.00

When you stop to consider the ordinary human hair is 3.00 thousandths of an inch in diameter, you will obtain some idea of the smallness of these filaments.

The size of the filament controls in a large measure, the current flowing thru the lamp and accordingly the temperature of the filament. The light emitted depends on the temperature of the filament, the higher the temperature the greater the light emitted. For every one per cent in-

the melting point to prevent evaporation of the filament and prolong its life. Evaporation occurs at 2,150 degrees C. for tungsten, 1,900 degrees C. for carbon. Hence the Mazda lamp can operate at a higher temperature than the old carbon lamp and will give off a correspondingly greater light for the same amount of current used. Gas-filled lamps can operate at higher temperatures than the vacuum type lamps as the gas retards the evaporation of the filament thus prolonging its life. Consequently the gas-filled lamp is the more efficient type of lamp.

It is interesting to note that only 1½ to 2½ per cent of the energy consumed by the Mazda lamp is transformed into light. The balance (97½ to 98½ per

cent) is wasted in heat. Only one-half of one per cent of the energy of a carbon lamp is transformed into light. Heat losses in Mazda C gas-filled lamps are greater than in the Mazda B vacuum lamps because any gas will conduct heat better than a vacuum and convection also cools the filament. However, these heat losses are cut down considerably by first selecting an inert gas of low conductivity, secondly, by shaping the filament so it presents as small a surface as possible to the circulating gas. The thick

TABLE SHOWING COST PER HOUR OF CURRENT CONSUMED AT RATES FROM 1c TO 10c PER KILOWATT HOUR

		RATE PER KILOWATT HOUR IN CENTS																			
Watts Consumed		.01	.015	.02	.025	.03	.035	.04	.045	.05	.055	.06	.065	.07	.075	.08	.085	.09	.095	.10	
1	.0001	.00015	.0002	.00025	.0003	.00035	.0004	.00045	.0005	.00055	.0006	.00065	.0007	.00075	.0008	.00085	.0009	.00095	.001	.0011	
2	.0002	.0003	.0004	.0005	.0006	.0007	.0008	.0009	.001	.0011	.0012	.0013	.0014	.0015	.0016	.0017	.0018	.0019	.002	.0021	
3	.0003	.00045	.0006	.00075	.0009	.00105	.0012	.00135	.0015	.00165	.0018	.00195	.0021	.00225	.0024	.00255	.0027	.00285	.003	.00315	
4	.0004	.0006	.0008	.001	.0012	.0014	.0016	.0018	.002	.0022	.0024	.0026	.0028	.003	.0032	.0034	.0036	.0038	.004	.0044	
5	.0005	.00075	.001	.00125	.0015	.00175	.002	.00225	.0025	.00275	.003	.00325	.0035	.00375	.004	.00425	.0045	.00475	.005	.0055	
6	.0006	.0009	.0012	.0015	.0018	.0021	.0024	.0027	.003	.0033	.0036	.0039	.0042	.0045	.0048	.0051	.0054	.0057	.006	.0066	
7	.0007	.00105	.0014	.00175	.0021	.00245	.0028	.00315	.0035	.00385	.0042	.00455	.0049	.00525	.0056	.00595	.0063	.00665	.007	.0077	
8	.0008	.0012	.0016	.002	.0024	.0028	.0032	.0036	.004	.0044	.0048	.0052	.0056	.006	.0064	.0068	.0072	.0076	.008	.0088	
9	.0009	.00135	.0018	.00225	.0027	.00315	.0036	.00405	.0045	.00495	.0054	.00585	.0063	.00675	.0072	.00765	.0081	.00855	.009	.0099	
10	.001	.0015	.002	.0025	.003	.0035	.004	.0045	.005	.0055	.006	.0065	.007	.0075	.008	.0085	.009	.0095	.01	.011	
11	.0011	.00165	.0022	.00275	.0033	.00385	.0044	.00495	.0055	.00605	.0066	.00715	.0077	.00825	.0088	.00935	.0099	.01045	.011	.0121	
12	.0012	.0018	.0024	.003	.0036	.0042	.0048	.0054	.006	.0066	.0072	.0078	.0084	.009	.0096	.0102	.0108	.0114	.012	.0132	
13	.0013	.00195	.0026	.00325	.0039	.00455	.0052	.00585	.0065	.00715	.0078	.00845	.0091	.00975	.0104	.01105	.0117	.01235	.013	.0144	
14	.0014	.0021	.0028	.0035	.0042	.0049	.0056	.0063	.007	.0077	.0084	.0091	.0098	.0105	.0112	.0119	.0126	.0133	.014	.0155	
15	.0015	.00225	.003	.00375	.0045	.00525	.006	.00675	.0075	.00825	.009	.00975	.0105	.01125	.012	.01275	.0135	.01425	.015	.0166	
16	.0016	.0024	.0032	.004	.0048	.0056	.0064	.0072	.008	.0088	.0096	.0104	.0112	.012	.0128	.0136	.0144	.0152	.016	.0176	
17	.0017	.00255	.0034	.00425	.0051	.006	.0068	.00765	.0085	.00935	.0102	.01105	.0119	.01275	.0136	.01445	.0153	.01615	.017	.0187	
18	.0018	.0027	.0036	.0045	.0054	.0063	.0072	.0081	.009	.0099	.0108	.0117	.0126	.0135	.0144	.0153	.0162	.0171	.018	.0198	
19	.0019	.00285	.0038	.00475	.0057	.00665	.0076	.00855	.0095	.01045	.0114	.01235	.0133	.01425	.0152	.01615	.0171	.01805	.019	.0211	
20	.002	.003	.004	.005	.006	.007	.008	.009	.01	.011	.012	.013	.014	.015	.016	.017	.018	.019	.02	.022	
30	.003	.0045	.006	.0075	.009	.0105	.012	.0135	.015	.0165	.018	.0195	.021	.0225	.024	.0255	.027	.0285	.03	.033	
40	.004	.006	.008	.01	.012	.014	.016	.018	.02	.022	.024	.026	.028	.03	.032	.034	.036	.038	.04	.044	
50	.005	.0075	.01	.0125	.015	.0175	.02	.0225	.025	.0275	.03	.0325	.035	.0375	.04	.0425	.045	.0475	.05	.055	
60	.006	.009	.012	.015	.018	.021	.024	.027	.03	.033	.036	.039	.042	.045	.048	.051	.054	.057	.06	.066	
70	.007	.0105	.014	.0175	.021	.0245	.028	.0315	.035	.0385	.042	.0455	.049	.0525	.056	.0595	.063	.0665	.07	.077	
80	.008	.012	.016	.02	.024	.028	.032	.036	.04	.044	.048	.052	.056	.06	.064	.068	.072	.076	.08	.088	
90	.009	.0135	.018	.0225	.027	.0315	.036	.0405	.045	.0495	.054	.0585	.063	.0675	.072	.0765	.081	.0855	.09	.099	
100	.01	.015	.02	.025	.03	.035	.04	.045	.05	.055	.06	.065	.07	.075	.08	.085	.09	.095	.1	.11	
200	.02	.03	.04	.05	.06	.07	.08	.09	.1	.11	.12	.13	.14	.15	.16	.17	.18	.19	.2	.22	
300	.03	.045	.06	.075	.09	.105	.12	.135	.15	.165	.18	.195	.21	.225	.24	.255	.27	.285	.3	.33	
400	.04	.06	.08	.1	.12	.14	.16	.18	.2	.22	.24	.26	.28	.3	.32	.34	.36	.38	.4	.44	
500	.05	.075	.1	.125	.15	.175	.2	.225	.25	.275	.3	.325	.35	.375	.4	.425	.45	.475	.5	.55	
600	.06	.09	.12	.15	.18	.21	.24	.27	.3	.33	.36	.39	.42	.45	.48	.51	.54	.57	.6	.66	
700	.07	.105	.14	.175	.21	.245	.28	.315	.35	.385	.42	.455	.49	.525	.56	.595	.63	.665	.7	.77	
800	.08	.12	.16	.2	.24	.28	.32	.36	.4	.44	.48	.52	.56	.6	.64	.68	.72	.76	.8	.88	
900	.09	.135	.18	.225	.27	.315	.36	.405	.45	.495	.54	.585	.63	.675	.72	.765	.81	.855	.9	.99	
1000	.1	.15	.2	.25	.3	.35	.4	.45	.5	.55	.6	.65	.7	.75	.8	.85	.9	.95	1	1.1	

heavy filament used in 100 watt gas-filled lamps and larger sizes has less surface exposed to the circulating gas compared to its volume than the small filament used in lamps of less capacity, hence the heat losses in gas-filled lamps of much less than 50 watts are considerable.

The Rating of Lamps: Formerly lamps were rated in candle power. The old standard size carbon lamp gave off light equivalent to 16 candles and was so rated; it used 50 watts. The modern Mazda B lamp, vacuum type, is rated at 25 watts and gives approximately 16 candles. The same light then, can be obtained for one-half the cost. Lamps are now standardized at 10-15-25-60-75-100 watts. Nothing is said about candle power.

Cost of Electric Light: Suppose a dwelling uses the following lights and it is desired to compute the cost:

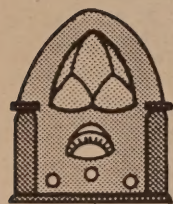
Kitchen 2 50-watt lamps—100 watts
Dining-Room 4 50-watt lamps—200 watts
Living-Room 4 50-watt lamps—200 watts
(With floor lamp)

Total 500 watts

The maximum connected load, then, is 500 watts or 0.500 kilowatt. For the first 30 hours use of this maximum load or $(30 \times .5) = 15$ kilowatt-hours you pay at the rate of 10 cents or $(15 \times 10c) = \$1.50$. For the second 30 hours use of the maximum load you pay at the rate of 6 cents or $(15 \times 6c) = \$0.90$. For anything more than (15×15) or 30 kilowatt hours you pay at the rate of \$0.03 per kilowatt hour. Your meter bill will appear then somewhat as follows:

Meter	Total	First	Second	Excess
Read-	Con-	30 hrs.	30 hrs.	over 60
ings	sump-	use of	use of	hrs. use
	tion	Max.	Max.	of Max.
		KW hrs.	KW hrs.	KW hrs.
May 28				
0850	32	15	15	2
April 28				
0818				

Cost $15 \times 10c$ $15 \times 6c$ $2 \times 3c$
Total Amount of Bill.....\$2.46



Mid-Atlantic
Antique Radio Club

Regarding MAARC's history, we held our first meeting in my family room in July, 1984. Ted Hannah and I could come up with 22 persons we knew had some interest in radios, and 15 of the 22 attended our first meeting. The first few meetings were held in my home, but when we reached about 30 attending, we had to find another place to meet. In our first year we saw MAARC grow from 15 to just over 100, and at the end of our second year we topped 200. We beat our goal of 300 by July '87 by several months, and had achieved 400 members by November '87. 1988 saw us top 500, and we are closing on 600 members this year. We are the 4th largest club in the country (AWA - 2, ARCA - 2, SCARS - 3, & MAARC - 4), and my goal is to overtake SCARS and become the largest "regional" club, if we can still call ourselves regional. I

have been president since we formed, and it should be obvious that my efforts are directed toward continued growth. I spend a good deal of time and postage soliciting new members, and it has paid off. Most of our new members renew their membership.

The biggest item MAARC has to offer is our truly great monthly newsletter. We devote the lion's share of our efforts to producing a first class publication, a fact recognized by our members and other clubs. We have members from coast

to coast, and also in England, France, Australia and Japan.

Our monthly meetings (10 of them, we don't meet in August and December) are very well attended. We meet halfway between Baltimore and Washington at the John Hopkins University's Applied Physics Laboratory, and our monthly attendance is usually just over 100, with many coming from northern Virginia, Gettysburg, Philadelphia, and as far away as New York and New Jersey. We always have a short business meeting, a presentation on

restoration, cabinet refinishing, history, or some other topic of interest. We have many tables loaded with sets and items to swap and sell, and have a two phase auction. One part is where we auction off items for members, with 10% of the sale price going to the club, and the second part is items donated to the club to auction off. We typically bring in \$100 to \$300 per meeting. We use this to defray newsletter costs and for other club projects.

We have used our purchasing

#1.

UNITED STATES OF AMERICA

Department of Commerce and Labor
NAVIGATION SERVICE

OPERATOR'S CERTIFICATE OF SKILL IN RADIOCOMMUNICATION

This is to certify that, under the provisions of the Act of June 24, 1910,

James M. Baskerville
has been examined in radiocommunication and has passed in

- The adjustment of apparatus, correction of faults, and change from one wave-length to another;
- Transmission and sound-reading at a speed of not less than fifteen words a minute American Morse, twelve words Continental, five letters counting as one word.

The candidate's practical knowledge of adjustment was tested on a "combination" set of apparatus. His knowledge of other systems and of international radiotelegraphic regulations and American naval wireless regulations is shown below

Excellent.

Mr. J. Baskerville
(Signature of examining officer)

Place New York, New York Date May 25, 1911

By direction of the Secretary of Commerce and Labor:

E. M. Chamberlain
Commissioner of Navigation, Washington, D. C.

I, James M. Baskerville, do solemnly swear that I will faithfully preserve the secrecy of all messages coming to my knowledge through my employment under this certificate, that this obligation is taken freely, without mental reservation or purpose of evasion, and that I will well and faithfully discharge the duties of the office. So help me God.

James M. Baskerville
(Signature of holder)

Date of birth Oct 4, 1884 Place of birth Charlotte, N.C.

Sworn to and subscribed before me this 25th

day of May, 1911

(Seal)

John S. Woods
(Signature of Notary Public)

Notary Public

*It is not intended to limit the employment of the holder to a particular system, but merely to indicate the particular system in which he was tested for adjustment of apparatus.

This certificate is valid for two years, subject to suspension or revocation by the Secretary of Commerce and Labor for cause. It should be kept where it can be shown to officers of the customs or other officers of the Government just before the ship leaves port.

11-2208

WIRELESS LICENSE NO. 1

In 1910, an Act to Regulate Radio Communication was passed by Congress and, in addition to specifying "certain ships" which were required to be equipped with wireless telegraphy, provision was made for examination and licensing of operators.

power to obtain large quantities of parts at bargain prices for members. We have purchased capacitors and nearly 800 6U5/6G5 magic eye tubes which we sell to members for only \$6.00 or \$7.00 to non-members.

Our most recent project is working with Capitol College to establish a museum. They have a new campus south of Laurel and are beginning to work on a new library building and we hope to have a museum within the library building. The president of the college is very enthusiastic and supportive, and we are quite optimistic.

That's pretty much the story of MAARC. We have come a long way from 1 to 3 page newsletters written by me and typed by my wife. I'm very proud of the club and of the fine cadre of officers and directors that have made us as successful as we are. I firmly believe that MAARC will continue to grow and be successful. I anticipate much of our future growth will be in distant areas as our newsletter draws them in.

I almost forgot to say that MAARC hosted the 1987 ARCA convention in the Washington area, and it was, without doubt, the most successful Antique Radio Club of America Convention ever. We managed a special tour to the Smithsonian Institute, which was very good, and had several outstanding presentations. ARCA would like for us to host another one, and we probably will.

Membership chairman for Mid-Atlantic Antique Radio Club is Nevell Greenough, 62 Nancy Drive, Hamilton Square, NJ 08619.

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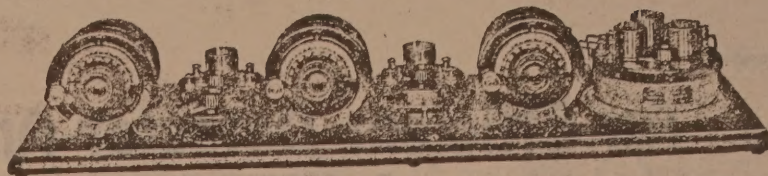
AD DEADLINE

22th of the
preceding month

Atwater Kent Radiodyne—"The Wonder Set"

1923

The 5-Tube
Sensation that
Every One Is
Talking About.



Priced at \$100
in Standard
Model and \$104
in De Luxe
Model, f. o. b.
the Factory.

The best recommendation for any article is the satisfied owner, particularly in Radio sets, so the very best that can be said of this set will be what its owners will say. With complete assurance, we refer you to any owner, whether he be in city or country, near a powerful local station or not; even to those owners in such hitherto pocketed places as Reno or Eureka. All, all speak well of this set because of its simplicity, loud speaker volume even on distant stations, and because of its consistent results, week after week. So we advise you to ask any owner. The Atwater Kent Radiodyne set and the Atwater Kent Loudspeaker are the great outstanding achievements in radio. You get a new conception of radio when you hear this set; even the experienced radio fan is thrilled by its clear bell-like reproduction, without noise and without interference.

The Radiodyne set has a special hookup licensed by the Atwater Kent Manufacturing Company and is designed for all DX signals. The set is completely wired, and each instrument is so beautifully and elegantly made that it can be table mounted. The set is finished either in standard black, or in brown crystalline finish, but we ask option of shipping either. The set is a five-tube receiver with detector, two stages of radio and two stages of audio, using quarter-amp. tubes or if you want particularly fine results and distance, using a one-amp. detector tube. The tuning is accomplished by variable condensers, the grid bias being taken care of by a potentiometer. The condensers are completely shielded so that the set has no body capacity effects whatever. It is mounted on a mahogany panel, beautifully finished and there are no crossed wires in the remarkable wiring arrangement. Combined posts for both long and short antenna are furnished, together with posts for three speakers. Additional posts are provided for headsets, cutting out the audio stages if desired.

So far as actual operation goes, we have had some very remarkable letters. One dealer, among the largest on the coast, says that "this set is the finest on tonal quality, distance and all-round reproduction that he has ever handled." He placed an order for 51 sets. Another dealer writes that he has sold 21 and that "all the sets have brought in Chicago on Loud Speaker without a single failure." The demand for the sets has been irresistible. It has been called "The Wonder Set."

The three leading radio engineers of the Navy on the Pacific coast, after studying this set and hearing it, pronounced it the finest they had ever listened to and as a dealer who was present said, "those three officers are the radio brains of the Pacific fleet." We have a letter from Reno, which has been a hard town for all sets, that on the second night of operation they secured New York readily. A set at Redding on its first night of operation secured everything on the coast and in addition Davenport, Iowa. Another set with a crude 27 feet indoor aerial got everything on the coast on Loud Speaker and ended the evening with Mazatlan, Mexico. We can furnish to those desiring them, both local and out of the city names of present owners without hesitancy, because as far as we know every owner is more than satisfied with the equipment.

One of the beauties of Radiodyne is that when you find a station you can note the dial settings and the particular station is in the future always found on the same setting. The set is very easy to tune, but on distant signals, namely, from Chicago, east, those who have operated the set longest are doing best. In other words, the experience and use of the set vastly improves your recep-

tion. Dial settings are approximately the same for all sets, but they vary a little, depending on the set itself, the antenna, the location of your city and on your phone or Loud Speaker.

In San Francisco we have many operators who cut through Hale Bros. K P O cleanly for distant stations and we are one mile or less away from K P O. An inexperienced operator could not do this as close as we are to K P O, but a novice could accomplish this result easily if he were two or three miles away from this powerful station. One of the surprising things about the set is that with the Atwater Kent Loud Speaker distant broadcasting is brought in with absolute tone fidelity and loud enough not only to fill an ordinary room but so that in most cases you will operate well under the capacity of the set.

You will find listed some of the dial settings which we have been getting at various points. We are indebted to our many fans for these, and also to a gentleman who is troubled with deafness and who never found a set outside of this one that reproduced natural tones so accurately that he could enjoy radio. With Radiodyne he has heard clearly without an acousticon after using one for twenty years. In addition to the stations listed here we are daily receiving other readings, so the list is already too long to print in full.

The factory announced the set in November and within a month telegraphed they were 21,000 sets behind orders, and were running two factories night and day. We are receiving sets regularly. Preference is given to orders first placed and to dealers first established. We promise fair consideration to every order.

The Radiodyne set requires from 22 to 135-volt "B" batteries. You can use either a wet or dry "B," which we can supply here. It also requires a wet "A" battery, which we can also supply if you do not have your own arrangements for securing these. Use a thick plate "A"—you can "hear" a cheap battery on this sensitive set. The set will operate with "peanut" tubes, but we recommend for best results that the Atwater Kent set be used as it is without adaptors and that it be used with the Atwater Kent Loud Speaker. We know what the set will do thus equipped. We supply correct tubes, headsets, batteries and clips.

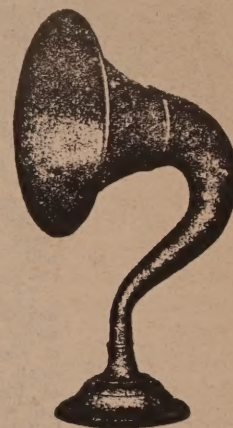
The Atwater Kent Loud Speaker is a very beautiful piece of workmanship. The base and horn are cast solid, the horn being swiveled. It is finished in crystalline black enamel, and is extremely heavy, resulting in very beautiful tonal reproduction. In the base of the Loud Speaker is an adjustable device whereby tone volume may be controlled. This reproducer also comes as a phonograph attachment. You must see the Speaker or use it to appreciate its worth. We have here for various dealers and customers demonstrated this Speaker side by side with almost every other make and we have no hesitancy in recommending it as the finest product on the market. Demonstrations under similar conditions made by yourself will, we believe, convince you that Mr. Kent has brought out something of extraordinary value to radio.

We have a dealer proposition open which should prove attractive to every electrical store, shop or every individual contemplating going into the radio business. You must qualify fairly and legitimately be in the radio business. It is your opportunity to get into a wonderfully attractive proposition if you can measure up.

There has been organized by our officials a company which will buy and sell installment paper. The formation of the company was prompted by the fact that many sales of these sets are made to thoroughly reliable people on installments. The new company is well under way. In brief, it will handle deferred payment paper and make it possible for the dealer to sell a set on installments and for the owner to acquire one on easy payments. Dealers with an established business should make early request for a definite allotment of credit under this plan. It is an exceptionally valuable aid in sales.

Again, let us say that the hundreds who have Radiodyne sets speak in no uncertain terms. And what more can we do than to let them tell the story of the Wonder Set?

AUTOMOTIVE SERVICE AGENCY, Distributors
950 Van Ness Avenue San Francisco, Cal.



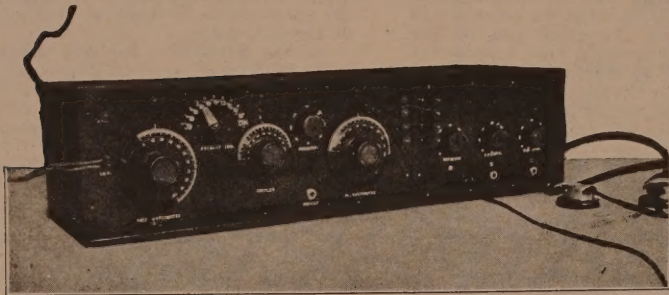
CALL LTRS	City	State	1st Dial	2nd Dial	3rd Dial
CYR	Mazatlan	Mex.	20	20	19
KFBX	Sacramento	Cal.	13	8	8
KUO	San Francisco	Cal.	20	20	20
KZM	Oakland	Cal.	20	15	15
KLX	Oakland	Cal.	20	20	15
KZN	Salt Lake	Utah	18	19 1/2	16 1/2
KGG	Portland	Ore.	20	20 1/2	18
KFI	Los Angeles	Cal.	43	43	41 1/2
CHCE	Victoria	B. C.	10	10 1/2	8 1/2
KFCL	Los Angeles	Cal.	20 1/2	22	20 1/2
KPO	San Francisco	Cal.	34	34	33
CFCN	Calgary	Alta.	39	39 1/2	39
KGW	Portland	Ore.	52	52	50
KHJ	Los Angeles	Cal.	27	27	27
WTAM	Cleveland	Ohio	25	24 1/2	24 1/2
WLV	Cincinnati	Ohio	8 1/2	9	9
CFAC	Calgary	Alta.	36	36	36
KJS	Los Angeles	Cal.	18	18	15 1/2
KTW	Seattle	Wash.	17	17	16
WHB	Kansas City	Mo.	30	30	30
	Omaha	Neb.	61	60	60
CFCB	Calgary	Alta.	29	29	27
CHBC	Calgary	Alta.	30	30	30
CKCD	Vancouver	B. C.	30 1/2	29	31

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Radio News for April, 1923

An Efficient Detector-Amplifier Unit

By ARTHUR W. LAMBERT, Jr.



View of the Tuner and Detector-Amplifier Units. An Article on the Construction of the Tuner Appeared in the October Issue of Radio News

SINCE my article *A Novel Short-Wave Regenerator* appeared in the October number of RADIO NEWS I have been kept busy answering letters from those who desired to build the set. Many wanted to know what the four binding-posts at the left of the panel were used for,—those marked G, T, T and F. In answer to this question I will say, they are my abbreviations, respectively, for Grid, Tickler, and Filament. And, as mentioned in the article, are provided in case an external detector, with or without amplifiers, is to be used.

I am also receiving requests for hook-ups, dimensions and "minute details" for constructing a detector-amplifier unit to go with this outfit; and as my time is limited to the extent that individual answers of such extensive nature are out of the question, I thought it best to "broadcast" this information through the columns of RADIO NEWS where all who are interested may see it.

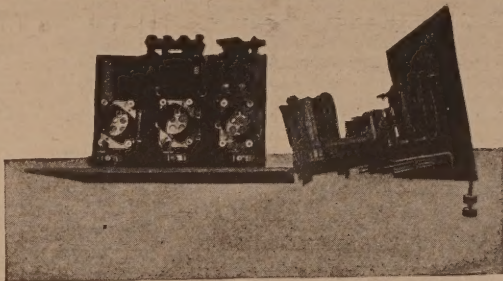
A view of the two units (the original short-wave regenerator and the herein described detector-amplifier unit) is shown in an accompanying photograph. The smaller cabinet on the left contains a detector and two stages of audio frequency amplification. The binding-posts for connecting the detector-amplifier unit to the tuner are on the left of its panel, matched to the four relative binding-posts marked G, T, T and F on the original. This makes it necessary to employ only four short bits of wire to hook together the two units. These connections are made in front because with them so placed it is easy to disconnect the short-wave set and hook on another tuner at will. The battery connections are all in the rear.

To some it might seem unnecessary to include another detector. However, the added cost of duplicating the detector socket, rheostat and one or two other items is small compared with the great convenience of having a detector-amplifier unit that will function with any other tuner the builder may want to work with it. The writer is now using such a unit and is continually changing it from his short-wave set to a honeycomb outfit so as to get Arlington and the long waves. Of course it is not necessary to employ two detector tubes.

Many of the letters received in quest of information regarding the construction of the short-wave-regenerator were from novices who knew next to nothing about radio. These prompt me to advise such beginners in this fascinating field that it is wise to make haste slowly. Mount the instruments "laboratory fashion" first. Place them on a board in any convenient manner. Connect them up in any old way to begin with,—and make them work. In this way you will become accustomed to the way dif-

ferent things act. After this so called "undress rehearsal" a neat job resulting in a cabinet receiver is a mere second step. The arrangement and dimensions herein given are merely suggestions. The dimensions may have to be changed slightly if apparatus of different makes than those listed by the writer are used. However, by following the details carefully the constructor is sure to come across useful little kinks that may be employed with benefit.

The following materials are necessary for the construction of this unit. Standard apparatus of other makes may be used if desired; only care must be taken, as mentioned above, to see that they fit in place properly. Like the short-wave regenerator, this unit is completely panel-mounted, which



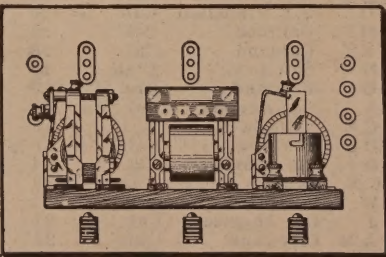
Interior View of the Detector-Amplifier Unit Clearly Showing the Arrangement of the Parts

makes it easy to remove the "works" from the cabinet for alteration or repair.

MATERIAL NEEDED

- | | |
|--|--------|
| 1 Cabinet, oak, mission finish, 7" x 11" | \$4.00 |
| 1 Hard rubber panel..... | 1.50 |
| 3 Vacuum tube sockets..... | 3.00 |
| 3 No. 131 Frost jacks..... | 2.70 |
| *2 Amplifying transformers | 9.50 |
| **3 Cutler-Hammer filament rheostats | 3.00 |
| 1 Grid condenser and grid leak (home-made) | — |
| ***11 Binding-posts | 1.10 |
| 1 Oz. tinfoil | .10 |
| 1 Wood board, 8½" x 6" x ½" | — |
| 12 Ft. spaghetti | 1.20 |

Perspective Drawing of the Described Unit. The Sockets and Transformers Are Mounted on a Shelf, a Most Convenient Method.



- | | |
|---|-----|
| 20 Ft. No. 14 aerial wire..... | .10 |
| 3 Doz. ¼" No. 4 round-head brass woodscrews | |
| 1 Doz. ¾" No. 6 round-head woodscrews | |
| 1 Doz. No. 6 brass washers | |
| 3 2" No. 6 flat-head woodscrews | |
| 8 1" No. 8-32 round-head brass machine screws | |
| 8 No. 8-32 hexagon brass nuts | |
| Total cost, about..... | .50 |
| 6 Small two-cell flashlight batteries | .60 |

\$27.30

*Any good amplifying transformer may be used.

**It is recommended that the vernier type of rheostat be purchased for the detector tube.

***The writer uses binding-posts having a 1" No. 8-32 machine screw with brass base-lug and thumb-nut tapped clear through. This makes it unnecessary to fit the binding-post to any special panel thickness, and leaves plenty of room for heavy inter-unit connections.

Should the builder desire to economize, he can build his own cabinet. Dimensions for it will be seen in Fig. 4. Also, since this set was constructed, radio materials have flooded the market and prices noted above can nearly always be beaten at the present time.

Fig. 1 shows the layout of the panel. This layout should be copied on a sheet of paper, full size, and this paper used as a pattern to locate the holes. Except for the difference in dimensions and lettering, the laying out and preparation of this panel is identical with that for the panel for the short-wave regenerator and it is recommended that the instructions relative thereto given on page 700 of October RADIO NEWS be closely followed.

The four binding posts on the left should be marked G, T, T, and F. The two binding posts on the right should be marked OP (referring to output). And under each rheostat knob mark respectively the words Detector, 1st Step and 2nd Step. Name plates like these may be purchased from radio dealers and attached to the panel with small escutcheon pins. A series of arrow-heads are stamped at intervals around each rheostat knob as a position indicator for the pointer. A close scrutiny of the photograph will show this marking.

Although shielding is not as essential in this unit as in the short-wave regenerator unit, it is a good precaution to take, and inexpensive. The writer prefers to shield the inside of the entire detector-amplifier cabinet. Heavy tinfoil is stuck in place with shellac, and a layer of brown wrapping paper smoothed on over this. This shielding should then be grounded. Although not shown herewith, an additional binding-

Fig-2

Radio News for April, 1923

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post in electrical contact with the shielding may be put on the back, in a position so as not to interfere with the battery connections. This post may then be connected with a short length of wire to the regular ground connection.

Fig. 2 shows the back and side views of the panel assembly. No dimensions are given as the instruments should be mounted according to the make used. It will be seen from this sketch how the unit system of mounting all instruments to the panel is accomplished.

The only item of importance not shown in detail with dimensions, is the socket-transformer shelf. This is only a board measuring $8\frac{1}{2}'' \times 6'' \times \frac{1}{2}''$. It should be a piece of well dried wood, shellacked, and held in position by the three 2" No. 6 flat-head wood screws. The holes in the panel should be countersunk for these three screws. The position of these screws is clearly shown in the side view of Fig. 2.

The writer recommends that the mounting be in the following order:

- (1) Mount the rheostats.
- (2) Mount the jacks.
- (3) Mount the binding-posts.
- (4) Mount the wooden shelf (counter-sink screwheads).
- (5) Mount the tube-sockets (keep the G and P to the rear).
- (6) Mount the transformers (at right angles as shown).

If everything is laid out as indicated, it will be found that ample clearance for the tips of the vacuum tube (if Radiotrons or Cunninghams are used) is provided for. However, if any slight changes are made this should be made sure of, and in case there is not enough clearance, holes should be bored in the lid of the cabinet to permit its being closed.

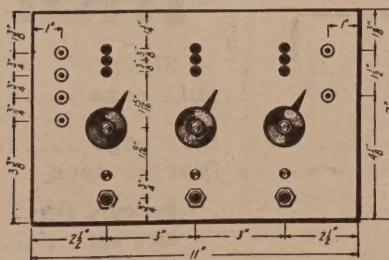
After all the instruments are mounted, as shown in Fig. 2, the unit is ready for wiring, but before doing this the whole should be carefully tested for accidental grounds to the shielding. This is the time to make certain that no such grounds occur. An accidental ground discovered and remedied at this stage of the construction may save hours of hunting and repairing later.

A battery and buzzer or a battery and flashlight should be used to do this testing. One wire from the tester should be held in firm contact with the tinfoil shielding and the other brushed against all the other instruments in turn. Also ascertain that each instrument is electrically insulated from other instruments.

When sure that no accidental grounds exist, the unit is ready for wiring.

The hook-up for this unit is shown diagrammatically in Fig. 3. This is a standard detector two-step audio frequency amplifier circuit.

The attention to the builder is directed to the two batteries in the grid leads of the amplifier tubes (marked "C"). These batteries are seldom used and may not be necessary; nevertheless their use will probably improve the amplification of the tubes considerably. Provision should be made for inserting these batteries after the unit is complete. They may be placed in the cab-



Dimensions for the Layout of the Panel.

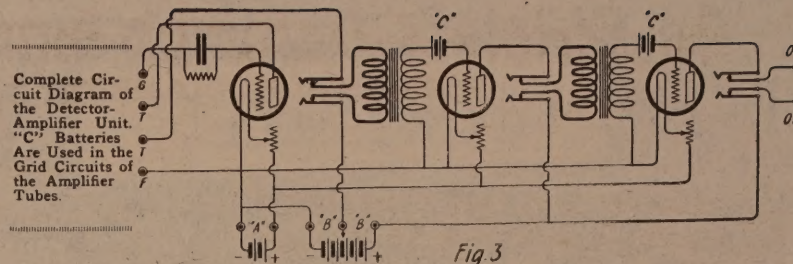


Fig. 3

inet. The proper voltage will have to be ascertained by trial. This will probably be found to be somewhere between four and eight volts. As the "C" battery supplies practically no current, small two-cell flashlight batteries of ten-cent store variety may be used. They will last indefinitely.

G, T, T and F in Fig. 3, as mentioned before, refer respectively to Grid, Tickler and Filament connections. The binding-posts marked OP are "Output" posts. Connections to a loud speaker may be made here, or another step of amplification added if one might be desired.

The "A" battery terminals are shown at A and the "B" battery terminals shown at B. Any 6-volt storage battery may be used

voltage at bottom, positive at top—negative at bottom.

To facilitate panel removal, five screws with brass washers should be put in the rear edge of the socket shelf-board and the "A" and "B" connections as shown in Fig. 3 made to them. These "sub-terminals" should be connected to the binding posts on the back of the cabinet with 12" lengths of flexible lampcord.

All wiring should be made with No. 14 bare copper wire, and the liberal use of spaghetti for insulation is encouraged.

It is recommended that a beginner make the connections as best he can and not try to make too neat a job until he becomes more familiar with the action of such a combination of apparatus. For a "professional" job, the wiring should be properly right-angled and should hug the instruments as closely as practicable. A glance at Fig. 2 will show a clear space from back to panel. If the wiring is made to hug the instruments and the panel, shields may later be placed between each amplifier step to further increase the efficiency of the unit.

The wiring of this detector-amplifier unit is a far more complicated matter than the wiring up of the Short-Wave Regenerator and far greater care should be taken. However, if the builder will make a light pencil sketch of the diagram of connections, and go over each connection heavily as soon as it is made, he should be able to complete the job without trouble.

When the hook-up is complete; TEST, TEST, TEST!

Make sure that there are connections where they should be, and that there are not any cross connections or short circuits where there should be insulation. And above all make sure that no "B" battery voltage gets into the "A" battery circuit. Whatever you do, do not put the tubes in place with "B" batteries connected until you know that everything is right. It might cost \$18 in real money to replace the tubes.

The cabinet shown in Fig. 4 was made of $\frac{3}{8}''$ oak, mission finish, measuring $7'' \times 11''$ by $8\frac{1}{2}''$ deep. This matches perfectly with the novel short-wave regenerator unit previously described; in fact, it is the same cabinet except that it is 11" instead of 18" wide. Fig. 4 gives all important dimensions and shows the locations on the back for the battery binding posts.

When all is ready the panel assembly should be placed half-way in the cabinet and the flexible leads from the "A" and "B" battery sub-terminals soldered to the proper binding posts on the back. Then push the panel assembly in place and fasten the panel to the cabinet with $\frac{3}{4}''$ round-head (preferable nickel finish) wood screws. To avoid confusion the holes for these screws were not shown in the panel layout; but a close look at the photograph of the complete outfit will show the location.

The lettering on the panel should now be filled in with white shoe-polish as explained in the former article, and the binding posts on the rear of the cabinet should be marked for identification.

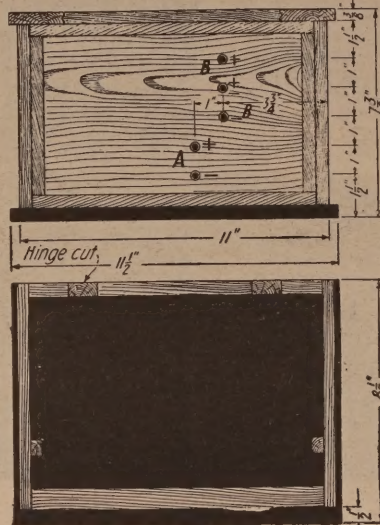
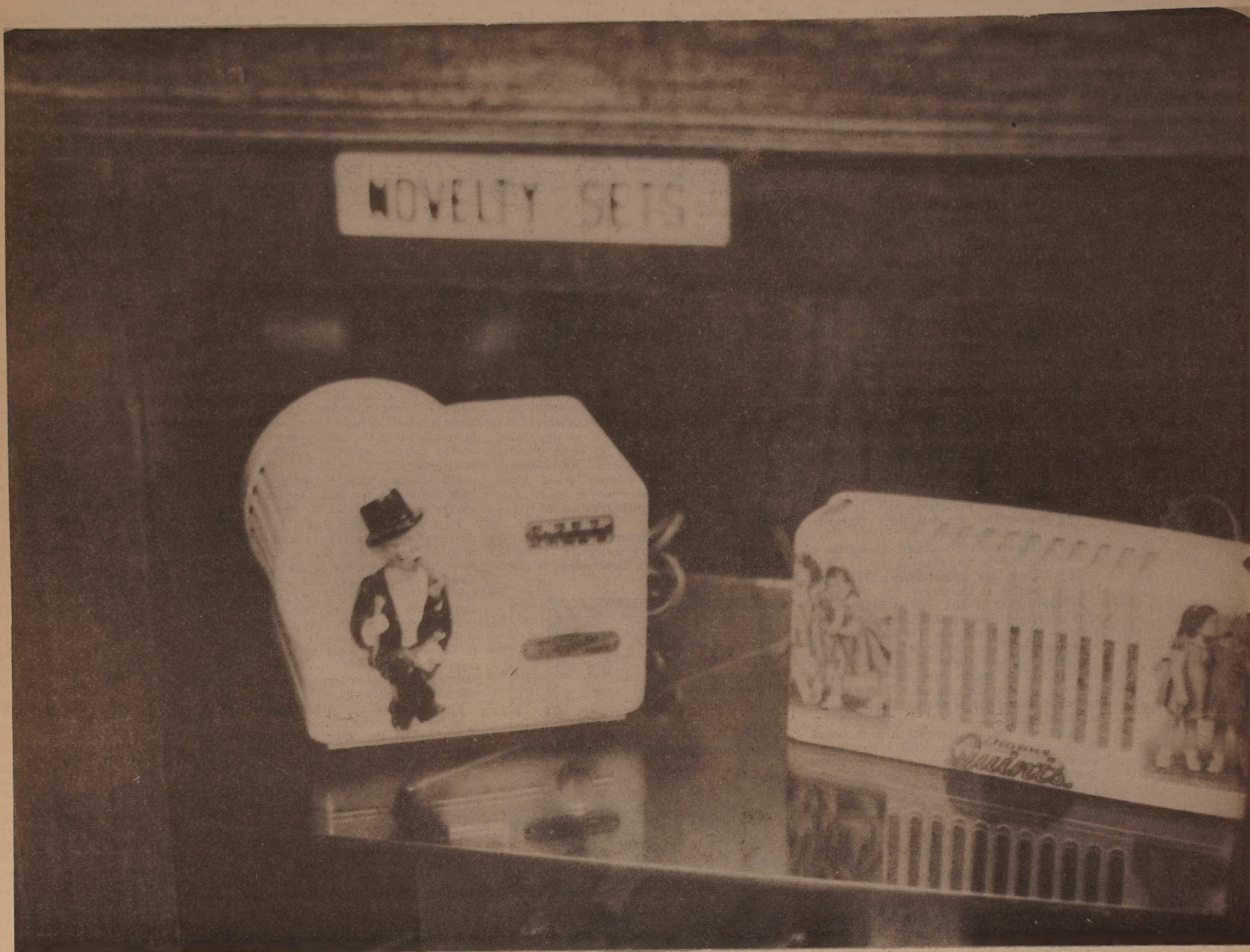


Fig. 4

Constructional Details of the Cabinet.

as an "A" battery; however, as three amperes are drawn when Radiotrons are used, the battery for such tubes should be of 60 ampere-hours capacity or larger, to obviate too frequent charging. If peanut tubes or other low voltage tubes are to be used, care should be taken to have the proper "A" battery and to place sufficient resistance in the circuit to prevent burning out the filament. For "B" battery a 45-volt battery with a tap at $22\frac{1}{2}$ volts, or two small $22\frac{1}{2}$ -volt "B" batteries may be used.

The battery binding posts are shown schematically in Fig. 3 in vertical rows, as they are shown in the cabinet plan in Fig. 4. With this scheme of battery binding post arrangement it will be found easy to make all battery connections. Beginning at the top we have respectively: (1) Positive terminal of plate battery; (2) Terminal for $22\frac{1}{2}$ detector plate voltage tap; (3) Negative terminal of plate battery; and below and in a line to one side; (4) Positive terminal of storage battery; and (5) Negative terminal of storage battery. This gives us a simple rule to follow when hooking on batteries; namely, high voltage at top—low



The Charlie McCarthy and the Dionne Quints radios are becoming more valuable as collectors are stopping at every flea market sign to look for them.

REGIONAL MEETING

Houston Vintage Radio Assoc./AWA

April 22, 23, 1989

Hotel Galvez
On the Seawall, Galveston, TX

Events include:

April 22 (Sat) Old equipment Contest,
Antique Radio Auction,
Awards Banquet, Ray Miller, Speaker
April 23 (Sun) Flea Market

For more information contact Bob Botto, Show Chairman, 3505 Del
Sur Dr., Baytown, TX 77521, or call (713) 468-4911.

flea market

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card ads \$1.00

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inch \$0.60

CLASSIFIED ADS FREE

UP TO 100 WORDS. Additional
words are 5 cents each.

 FOR SALE — SCHEMATICS, BOOKS, ETC.

FOR SALE OR TRADE— POPULAR ELECTRONICS magazines 1956-79; QST 1950-60 in binders (except 55-59). Will break sets by year. Mike Grimes, K5MLG, 3805 Appomattox, Plano, TX 75023.

 SET OF BACK ISSUES OF THE HORN SPEAKER, HERBERT F. DEGARD, 203 3RD STREET, EARLY, IA 50535.

1938 CAPITOL RADIO ENGINEERING COURSE COMPLETE IN 8 BINDERS PLUS 19 ISSUES OF CREI NEWS BULLETINS. 1943-50 ALL MINT CONDITION \$225 U.S. VIA UPS PREPAID, JACK, (604) 522-2418, 6758 BRYANT ST., BURNABY, B.C. V5E 1S8 CANADA

FOR SALE OR TRADE= 1938 NATIONAL RADIO INSTITUTE RADIO COURSE: APPROXIMATELY 80 BOOKLETS IN TWO NRI BINDERS. 1938 NRI TEST ANSWERS IN NRI GREEN BINDER. 1938 RADIO-TRICIAN'S SERVICE MANUAL IN BLACK BINDER. 1952 NRI RADIO COURSE IN NRI BINDER. ALL IN GOOD CONDITION. WISH TO TRADE AS PART PAYMENT ON ANY MANUFACTURED CRYSTAL RADIO, OR PARTS TO CRYSTAL RADIOS OR TWO CALIBRATED KNOBS 2 1/2" DIAMETER OR PHILCO ONE OR TWO TUBE 1938 SLANT FRONT KIT RADIO OR ANY SIMILAR ITEMS. RICHARD R. SPRATLEY, 2112 McLAIN STREET, CHESAPEAKE, VA 23324. PHONE (804) 545-2402.

THIS SERVICE MANUAL supplement contains a list of electrical values, resistors and condenser, coils and transformers in all Atwater Kent radios 1924-1933 inclusive \$3.50 P.P. 24 pages. ***** THIS BULLETIN contains the complete list of Philco black bakelite "by pass" condensers, new universal types, discontinued types with replacements and condensers with internal resistors \$1.50 P.P. — Lee Williams, 2015B 228TH S.E. Bothell, WA 98021.

FOR SALE— RIDERS MANUALS, ABRIDGED (VOL. 1-5) AND VOL. 6 THROUGH 16 \$275.00. VOL. 9, 10, 14 \$20.00 EACH. ANTIQUE RADIO SERVICE, O. H. McDONALD, 2535 WEDGLEA #124, DALLAS, TX 75211.

SCHEMATIC \$1.25 each, give make and model number. New manuals of old tubes, substitution guide, characteristic, VT numbers and pin out guide, Tubes, books, and parts. Send SASE to House1, 1816 S.W. 12, Lincoln, NE 68522.

ELECTRONIC ORGAN SCHEMATICS AND

MANUALS. SASE FOR PRICE QUOTES. MANY MAKES AND MODELS. ALTON H. BOWMAN, 4172 EAST AVENUE, RD 2, CANANDAIGUA, NY 14424.

FREE INFORMATION ON ANTIQUE RADIOS, Robert Johnson, 1895 Curtner, Apt. #2, San Jose, CA 95124.

 FOR SALE — GENERAL

THE VINTAGE RADIO FOUNDATION --- are you a member? — if not, get full information from Jim Lanphear, 4062 Oak Point Ct., Hayward, CA — 94542.

FOR SALE: RADIO RELATED TIE CLASPS & lapel pins, send a L.S.A.S.E., I also buy old wooden clocks; Michael S. Sabodish, Sr., 11 - A Matawan Avenue, Cliffwood, NJ 07721.

NATIONAL HRO. Older pin-type tubes. Rack mount. With six coil sets (not continuous). Fair shape. \$95; RME 69, rack mount (no cabinet) fair/good \$95; Two meter composite AM transceiver. Works! \$15; One WE 101D tube. Good filament. \$20.— Paul C. Crum, W9LC, 6272 N. Cicero Avenue, Chicago, IL 60646. (312) 282-3033.

FOR SALE: QST, 1917-1930; MAGNAVOX AC 3C AMP, \$250; GENERAL ELECTRIC E-61 ROUNDTOP, \$150; JACKSON 660 SIGNAL ANALYSER, \$15; A-TRONIX CODE READER, \$25; REPRO DeFOREST 0-90 CURVED SCALE PLATES, \$5; WD-11, NIB, \$40; THORDARSON SPARK TRANSFORMER, \$150; VT-1 or VT-2, \$25 EACH; RADIOLA AR1300 and AA1400, PREDECESSOR TO RADIOLA V, \$300; 23 TUBE SCOTT CONSOLE, \$600; WESTERN ELECTRIC 24A, 25A and 30A RELAYS, \$20 EACH. SASE FOR LIST. JIM COLLINGS, 12005 VICTORIA PL., OKLAHOMA CITY, OK 73120. (405) 755-4139.

FOR SALE: AIRLINE MIDGET BAKELITE, model 777?, very good, \$25. Philco 49-603, very good, opens like a book, \$25. Heathkit Mohican, mint, \$75. Admiral Bakelite, 45-J15, BC/SW, very good, \$25. JUNKERS: RCA Victor 45X1, good cabinet, FOS page 155. Crosley 56-PB, AC/Batt. Philco Transitone 52-540. All \$5. Add shipping. WANTED: Mint condition 24 hour clock for Hammarlund HQ-100A with installation instructions. J. S. Lowe, 3025 Harpers Ferry Road, Sharpsburg, MD 21782.

FOR SALE: RCA VICTOR portable AM radio #BP-10. 4 tube superhet, unusual about 1/4 the size of a shoe box, it is oblong, handle on side, lid opens, chrome grill frontpiece! Nice! Best offer. Like

new. TUBE CHECKER (old new tubes), pocket size, unused with instruction manual. quantity available. \$6.50 each. P.Pd.; — Military technical manuals, complete service with schematics for receivers. R-392/URR, R-390A/URR \$15 each P.Pd.; — Other T/M's available, low cost, send wants; — Dynamotor DM-34 #5; — Old crystal radio kits. Instructions, parts included. (quantity available) \$11. each P.Pd. (10 for \$90). D. Testa, P. O. Box 9064-HS, Newark, NJ 07104.

HEATHKIT HW-100, SHIP COD. M. G. Clute, K5DXV, Route 1 Box 1, Jewett, TX 75846.

FOR SALE: I HAVE SOLD MY RADIOS. All who have requested my list will get a revised list. I have a few battery radios and speakers. I have many amateur radios, tubes and magazines; also teletype equipment. military surplus; some nice test equipment. Amateur handbooks and magazines. I have to sell before March. Russ Olmsted, K4UJZ, 608 W. Thompson Lane, Murfreesboro, TN 37129. (615) 893-5344.

RME 69 EARLY RECEIVER. rack mount, generally good, weak on 160 meter band \$95; loose coupler, unusual replica \$35; crystal grinding outfit \$15; very early RCA/GE/Acme transmitter power supply transformer and choke (for Vu-202 & such) iron case \$45; Polaroids \$1.00@. All plus UPS. Paul C. Crum, W9LC, 6272 N. Cicero Avenue, Chicago, IL 60646. (312) 282-3033.

FOR SALE: ANTIQUE (1924 VINTAGE) ATWATER KENT BREADBOARD MODEL 10A IN ALMOST MINT CONDITION, WITH FIVE GOOD UX201A'S INCLUDING MODEL M HORN SPEAKER. WARRANTY AND INSPECTION TAGS ARE OK. \$700.00 PLUS SHIPPING AND PACKING. PREFER NOT TO SHIP. WILL CONSIDER SELLING SET OR SPEAKER SEPARATELY. LEO GIBBS, W8BHT, 701 BROOKFIELD ROAD, KETTERING OH 45429. (513) 299-3965.

SERVICE MANUALS RIDERS, HOWARD SAMS, RCA, PHILCO AND OTHERS. TUBE TESTERS, SIGNAL GEN'S. NEW AND USED TUBES, SERVICE PARTS, NEW N.O.S. VOLUME CONTROLS. DIAL BELTS. DIAL BULBS AND MORE. 1,000'S OF UNLISTED PARTS. WRITE WANTS AND SASE. NEW LIST SASE. JAMES BIDDLE FOOT CANDLES LIGHT METER \$25.00. WESTINGHOUSE FOOT CANDLE LIGHT METER BAKELITE CASE \$20.00. RADIO PANELS SIZE 24" X 7" \$18.00, 26" X 7" \$19.00, 18" X 8" \$18.00. SMALL REPO (PLASTIC CASE) AM-FM (NEW) CATHEDRAL RADIO 8" HIGH \$14.00. ALL PLUS SHIPPING AND HANDLING. SERVICE

SINCE 1930. KRANTZ, 100 OSAGE AVENUE, SOMERDALE, NJ 08083.

STEWART WARNER model 305, Stewart Warner speaker, American Bosch model 360, Silvertone model 1386, Clarion Jr. 320 superhetrodyne, small mirror tone deluxe, ivory colored radio with red knobs, case only for a Kennedy cathedral. Send for new list. Clifford Schoen, 549 Fulton St., Seymour, WI 54165. Phone (414) 833-2429.

EX COLLECTOR SELLING OUT (FOR YEARS) PHONOGRAPHS. 17 EDISONS. VICTORS. COLUMBIA, OTHERS. EXTRA PARTS, REPRODUCERS, HORNS, RECORDS. RADIOS, BAKELITE \$75. BAR RADIO \$250. TWO HALLICRAFTERS. CATHEDRALS. MORE. OLD TELEVISIONS. EXTRA CRTS. OLD CLOCKS. OLD GUNS. I AM THROUGH WITH ANYTHING. OLD OPEN TO OFFERS. CALL DAYS. CHARLES SEIDEL, (503) 479-4282.

FREE: Send 2-stamp LSASE for just released Flyer, No. 189 to: Olde Tyme Radio Company, 2445 Lyttonsville Road, Silver Spring, MD 20910.

MANY THOUSANDS OF OLD TUBES. LARGE 80, 81, 82, 83 BOXES OF WESTERN ELECTRICS RECEIVING AND TRANSMITTING TUBES, PEANUT TUBES, METAL TUBES, E. H. SCOTT TUBES, BOXES OF LOCTALS AND OCTALS. IV TUBES. ALSO FIRST EDITION RIDERS SUBSTITUTION GUIDE BOOK. ONLY SELLING ALL U PICK UP. TUNGAR BULBS. TO: BASIL ABBOTT, #4 BUNKER HILL, RICHARDSON, TX 75080.

FOR SALE: to receive America's best list of radios, tvs, mags, etc.. send \$1.50 for current list to: Jim Clark Enterprises, Dept., HS, 1292 Starboard, Okemos, MI 48864.

SEND LARGE SASE for list of radios., Donald Juleen, 6252 Ledge Road, Sturgeon Bay, WI 54235.

FOR SALE — PHILCO

PHILCO 95TH ANNIVERSARY limited edition cathedral radio, AM/FM transistor chassis, look a like to Philco model 90 - 1932- collector's item, only \$59.95 plus \$5.00 shipping. Maurer TV, 29 South 4th Street, Lebanon, PA 17042.

 FOR SALE — SCOTT

SCOTT ALLWAVE 12 IN NAPIER CONSOLE CABINET, GOOD UNRESTORED CONDITION, CABINET NEEDS MINOR VENEER REPAIR, TUBE COVERS AND COIL CANS NEED RECHROMED. TRADE FOR BEST OFFER OF

1940'S JUKEBOXES AND/OR PRE 1941
SLOT MACHINES. ALVIN HECKARD, RD1,
BOX 88, LEWISTOWN, PA 17044.

FOR SALE — SPLITDORF

SPLITDORF JC S 102 308 radio in an
Adler Royal cabinet, 44" high 38"
wide, walnut with two large doors
in front, extra set of tubes
\$200.00. (201) 228-0435. J.
Baerenrodt, 5 Pine Road, Roseland,
NJ 07068.

FOR SALE — TUBES, PARTS, ETC.

THORDARSON FLYBACK YOKES \$15.
POSTPAID 2 - 167, Don Aldred, 39
East 8th Street, Jacksonville, FL
32206.

FOR SALE: UV201A's, good emission,
brass base, no tip, (have 60)
\$15.00 each; Riders 1-5 abridged, 6
thru 14, \$150.00; AK models 20c,
21, 30, 32, 35, 49; Acme double
cone speaker \$35.00; Radiola 17
cabinet \$10.00; Radiola IIIa
cabinet \$15.00; Radiola 16 cabinet
\$5.00; Shipping extra. Will trade
for AK, RCA or DeForest items. —
Raymond Thompson, 7422 Cherry Tree
Drive, Fulton, MD 20759.

FOR SALE: UNUSED AND USED tubes,
cone speakers, electrolytic
capacitors, send SASE for lists, C.
Elmer Nelson, 11 S. Church St.,
Princeton, IL 61356.

FOR SALE — 500 NEW GE IN BOXES—
TUBES— ALSO HAVE TRANSMITTING TUBE
LIST. SEND SASE FOR 6 PAGE LIST.
RUSS OLMSTED, K4UJZ, 608 W.
THOMPSON LANE, MURFREESBORO, TN
37129 (615) 893-5344.

30 DAY SALE: New tubes in original
cartons \$2.00 each. 0Z4, 1AD2,
1BC2, 1R5, 2AV2, 3HQ5, 3Q4, 3S4,
4BZ6, 4BZ7, 5AVB, 5U8, 6AH4, 6AL5,
6AM4, 6AM8, 6AQ6, 6AS8, 6AW8, 6AY3,
6BC7, 6BF6, 6BJ8, 6BK5, 6BW8, 6CM7,
6CN7, 6CS7, 6CU5, 6CU8, 6CY7, 6DB5,
6DK6, 6EV5, 6FS5, 6GC5, 6HZ6, 6KZ8,
6U8, 6W6, 7AD7, 8AW8, 8CX8, 10EG7,
12A4, 12AB5, 12AL5, 12AT6, 12AT7,
12AV5, 12AV6, 12AZ7, 12C5/12CU5,
12D4, 12DB5, 12DT5, 12KS, 13DE7,
14E6, 14E7, 19AU4, 19J6, 35B5,
35W4, 35Z3, 50EH5, 5963, 5964. Add
\$2.40 shipping (Wisconsinites add
5%) Don Diers, 4276-S4 North 50th
Street, Milwaukee, WI 53216-1313.
Send \$1.00 (refundable) for lists
of tubes and stuff.

FOR SALE: GRILL CLOTH. New, custom-
made material in diamond pattern.
Good match for 1930's radios. \$6.00
for 10" X 12" piece, postpaid. Send
SASE for sample. Michael Katz, 200

East 30th Street, Apt. 8E, New
York, NY 10016. (212) 725-0736.

TUBES ONE-V 6.00, 6V5/6G5-6E5
12.00, 6L6M 17.00, 6L6 GC 10.00, 6
and 12 V 3 and 4 prong vibrators
12.50 all ppd. H. f. Brummell, 204
E. Maple, Americus, KS 66835.

FOR SALE: NEW IN ORIGINAL BOX,
215-A WESTINGHOUSE \$30.00. ONE
BRASSBASE UV-201-A TUBE EX. CON-
DITION POST PAID. \$20.00 NO TIP
USED. CLEON BOOTHE, BOX 235, CO-
HOCTON, NY 14826.

TELEVISIONS

RCA CT-100 FIRST PRODUCTION COLOR
TV set — beautifully restored
cabinet and meticulously restored
electronics with a great 15" color
picture like 34 years ago (1954).
An opportunity is now to own a
unique electronic invention of the
century. SASE and \$1.00 for photo.
Bill Russell, 3236 Laurel Canyon,
Santa Barbara, CA 93105. (805)
682-8115. Accepting offers through
March 1988 (min. bid \$2,500 or
\$3,500 sold outright.)

RCA TV Model 8PT7010 in red metal
case in working condition. Included
second set same model for parts.
Make offer. John Schellkopf, 1344
Goucher Street, Pacific Palisades,
CA 90272.

FOR SALE — ZENITH

THE CABINET IS IN MINT CONDITION
and the radio plays. It is a Zenith
12 tube superhetrodyne with a tun-
ing range 540-18400 kyc., chassis
1204-A. Marshall T. Bond, 8718
Linkfair lane, Houston, TX 77025.
(713) 668-0029.

FOR SALE: 1940'S VINTAGE ZENITH
CONSOLE radio and phonograph. Cab-
inet is in excellent condition.
\$250.00 — Call (815) 838-5398. 5
p.m. to 10 p.m. c.s.t. Dick Stauss,
Rt. 1 Box 399, Lockport, IL 60441.

WANTED — ATWATER KENT

WANTED: ATWATER KENT CATHEDRALS,
ESPECIALLY MODELS 90, 92, 228, 246,
AND 567. JIM COLLINGS, 12005
VICTORIA PL., OKLAHOMA CITY, OK
73120.

WANTED — BRUNSWICK

ONE PUSH BUTTON for a Brunswick
radio. Chassis M-27-6 serial #
1237. It is brown bakelite, 7/16"

in. diameter, 1" long. George C.
Edwards, Route 3, Box 956,
Henderson, NC 27536.

WANTED — CRYSTAL SETS

HOMEBREW CRYSTAL SET. Dial type
mounted on nice wooden cabinet.
Vernon Kostohryz, 600 Lakeside 3A,
Brownsville, TX 78520. (512)
541-5692.

WANTED — EDISON

WANTED FOR EDISON STANDARD phono-
model B. 1.) mainspring 2.) decals-
trademark and "Edison, 3.) cabinet
lid 4.) A. K. breadboard in excel-
lent condition. Carl Hickey, 27404
N. Highway 1, Fort Bragg, CA 95437.
(707) 964-0505.

WANTED — GENERAL

WANTED: RIDERS 1929 SERVICE MANUAL,
VOL. 1; PARTS FOR SPARTON MODEL 15;
AK MODEL R HORN; RCA MODEL VII,
VIIB; PARTS FOR ZANEY GILL; RAYMOND
THOMPSON, 7422 CHERRY TREE DRIVE,
FULTON, MD 20759.

WANTED: EARLY CANADIAN RADIO
MAGAZINES SUCH AS CANADIAN
WIRELESS, RADIO INFORMER AND
"RADIO". QST FOR 1918-19 ALL WAVE
RADIO, SHORT WAVE CRAFT 1931, RADIO
DESIGN AND RADIO BROADCAST 1928.
RCA VICTOR R35 WITH CABINET. AUDIO
TRANSFORMER FOR RCA R15 OR RCA
RADIOLA 48. RADIOLA 20 WITH GOOD
AUDIOS. SCREEN GRID TYPE BROWNING
DRAKE OR FACTORY BUILT SINGLE
CONTROL MODEL. SPARTON TRF MODEL
5-15 1925. COMPLETE CHASSIS WITH
DIAL OR JUST GOOD DIAL SCALE FOR
RCA 15 OR RCA RADIOLA 48. JONES 7
PIN PLUG WITH OR WITHOUT CABLE.
CRYSTAL DETECTOR FOR RADIOLA V AND
SE1420. RADIOLA 20 CHASSIS AND
RADIOLA 16 CHASSIS BOTH WITH VERY
GOOD AUDIO TRANSFORMERS. RON A.
MCNEILL, P. O. BOX 472, Yorkton,
SASK CANADA, S3N 2W4.

WANTED WANTED 50A1 TUBE. 6CD7 EYE
TUBE. OWNERS AND SET UP FOR THE
FOLLOWING. TUBE TESTERS WESTON 682.
676. JEWELL 538. PHILCO 050. MOSS
247. B&K CATHODE TUBE REJUVENATOR
MODEL 200. RCA 115-A COLOR PIX TUBE
TESTER. RCA W 87-B VTVM. HICKOK
203 VTVM. HICKOK 260 TV PATTERN
GENERATOR. SX42 HALLICRAFTER SW
REC. XEROX COPIES FOR THE ABOVE OK.
KRANTZ, 100 OSAGE AVENUE,
SOMERDALE, NJ 08083.

SCHEMATIC AND SERVICE INFO. FOR
TELE-TONE TL-208 AND FADA 899 MODEL
TELEVISIONS. ALSO NEED 4 DUD,
TIPPED WD 11 TUBES. Jim Corio, P.O.
Box 233, Blawenburg, NJ 08504.

(609) 466-0395.

BUYING SCOTT AND McDURDO SILVER.
WILL MATCH OR TOP ANY OFFER. JAMES
E. BRAGG, 30881 ALISO CANYON ROAD,
ACTON, CA 93550. (805) 269-0528.

DIAMOND "T" RADIO, dead horns,
speakers, fixer upper sets, 32 volt
items, parts for Bremer Tully
Counterphase, Thorola, Stewart
Warner 300, will swap repairs on?
— Jim Barratt, 26313 SE Leonard
Road, Camas, WA 98607.

FRONT DOOR of AK Kiel table. Also
want 16mm sound print of 3 stooges,
"A Plumbing We Will Go." Jim Baker,
704 Medway Road, Hagerstown, MD
21740-4130.

WANTED — DIAL AND SPEAKER FOR
KENNEDY MODEL 63 OR SIMILAR MODEL.
AUDIO TRANSFORMER FOR GREBE ROK-
LOOKING FOR FACTORY CRYSTAL SETS,
EXCEPT PHILMORE. RAY SCHOBBER, 4503
WEST DRIVE, NORTH LITTLE ROCK, AR
72118. (501) 771-1480.

CRYSTAL SET B & W PHOTOS of
manufactured units for book on
Crystal Set Era, Variometers,
Varicouplers, Crystal Detector
Stands, Headphones, Variable
condensers, etc. Will pay for
photos of manufactured crystal set
units and will purchase all parts.
Literature and books also wanted.
B. Turke, 660 N. Dixie Highway,
Hollywood, FL 33020.

WANTED — HEADPHONES

NONWORKING OR WORKING HEADPHONES:
Advance, Ajax, Allied, Aristocrat,
BASCO, Bel-Canto, Benwood-Linze,
Berkey, Berstan, Big Three, Blue
Streak, Brandes (early model that
has "Superior" stamped on wide
nickel band), Branston, Brown,
Churry, Clarion, Davis (bakelite),
DTW, DECO, Dymac, Eastern, Eisman,
Electro Importing, Essex, Ericson,
Everyone, Excelllo, Federal 52-W,
Friedlander-Koppler, Gold Stripe,
Gold Tone, Gundlach-Manhattan,
Hart-Hegeman, Hartford, Harvey-
Wells, Haynes-Griffin, Huball,
International, Interocan, IWB,
Jolley, Keystone, Kilbourne Clark,
Kodel, Lark, Litewate, Magnus,
Metro, Mackay, Majestic, Miller,
More Tone, Murdock Special, Music
Master, National, Navy Ordance
Supply, Ohio, Orator, Penn Headset,
Perfectone, Ports, Rasco,
Radiocraft, Radiotive, Randolph,
Red Head, Royal, Seco, Sears,
Spartan, Smelzer, Splitdorf, Sraco,
Steinmetz, Sunlight, TBM,
Teleradio, Tempest, Trego, Victor,
Welbilt, White Beauty, Wireless
Specialty, Ben Wolfe. Vernon

Kostohryz, 600 Lakeside 3A,
Brownsville, TX 78520. (512)
541-5692.

WANTED — LEUTZ

WANTED FOR LEUTZ MODEL "C" super-
het.: 2 Weston No. 301 voltmeter 0
- 10 volts DC. 2 Weston no. 301
ammeter 0-5 amps. DC. 4 General
Radio type 231 A audio transformer.
6 special Leutz I.F. transformers.
1 special E.I.S. (Leutz) oscillator
coil. 1 special E.I.S. (Leutz) R.F.
coupler coil. John A. Rawlins, Jr.,
1920 Stephenson Drive, Mesquite, TX
75149. (214) 285-2313.

WANTED — LITERATURE

SERVICE MANUAL FOR NATIONAL NC-7"
TV RECEIVERS. FRED EMERSON, 627
ILLINOIS AVENUE, ELGIN, IL 60120.

SCHEMATIC FISHER AMP. STEREO
MODEL 400 SERIAL 34732 S. ALL TUBE
AND HAS FOUR 7868 IN OUTPUT. J. MC
DADE, 204 E. JOPPA ROAD, # 214,
TOWSON, MD 21204.

SAM'S FOLDERS No's. - 55-5, 60-1,
61-16, 80-4, 81-3, 82-1 and 104-2,
FRED EMERSON, 627 ILLINOIS AVENUE,
ELGIN, IL 60120

INSTRUCTION MANUAL FOR EICO MODEL
950 A RC BRIDGE CONDENSER CHECKER.
H. F. BRAMMELL, 24 E. MAPLE, AMER-
ICUS, KS 66835.

EVERY DAY MECHANICS, VOL. I, NO. 4,
MAY 1916 OR A COPY OF "HOW TO BUILD
A TRANS- ATLANTIC WIRELESS RECEIV-
ING SET. K. A. LADD, 5240 44TH AVE.
S., MPLS., MN 55417. (612)
722-6786.

LAFAYETTE RADIO CATALOGS - 1960
THRU 1968, PLEASE STATE CONDITION
AND PRICE. MR. MICHAEL S. SABODISH,
SR., 11 - A MATAWAN AVENUE, CLIFF-
WOOD, NEW JERSEY 07721.

WANTED: OPERATING MANUAL and tube
data sheets for Jackson Dynamic
tube tester model 636. Zerox copy
O.K. Frank Hoffert, 19605 Chardon
Road, Cleveland, OH 44117.

WANTED - INFORMATION AND SCHEMATIC
for Blaupunkt Sultan 3D radio.
Model number unknown, 5 tube AM/
FM/ SW. Write Ray Carifio, N4LTS,
6014 SW 33rd Street, Miami, FL
33155

WANTED: LIBRARY BOUND volumes of
QST, CQ, 73 PRE 1960. ALSO GLOBE
SCOUT (WRL), MIKE GRIMES, K5MLG,
3805 APPOMATTOX CIRCLE, PLANO, TX
75023.

WANTED: SCHEMATIC AND INFO on Eico
ST 70 amplifier. Gordon Wilson,
11108 - 50 Avenue, Edmonton,
Alberta, Canada T6H 0H9.

WANTED: INSTRUCTIONS FOR PACO MODEL
25 IN-CIRCUIT CAPACITOR TESTER RCA
WR-50A SIGNAL GENERATOR CRYSTALINER
(CRYSTAL MODULES) GENERATOR, GLENN
HARTMAN, 5545 DEEP HOLLOW, FAY-
ETTEVILLE, NC 28311.

WANTED — NATIONAL

WANTED DEAD OR ALIVE FOR
RESTORATION NATIONAL HRO
COMMUNICATIONS RADIO. OLDER MODEL
PREFERRED USING EITHER 57/58 OR
6C6/6D6 TUBES. WILL PAY GOOD PRICE
FOR COMPLETE UNITS WITH POWER
SUPPLY AND COILS. DAVE MEDLEY,
K16QE, 1450 BAYVIEW HEIGHTS DRIVE,
LOS OSOS, CA 93402.

WANTED — PARTS, TUBES, ETC.

CHANNEL SELECTOR KNOB. CHANNEL
INDICATOR BEZEL FOR PHILCO
PREDICTA. — Joe Cunningham, 917
Lunt Avenue, Schaumburg, IL 60193.

CHROME TUBE CAP FOR NEUTROWOUND
BATTERY RADIO. RUSSELL SCHOEN, E.
7340 NIETZKE ROAD, CLINTONVILLE, WI
54929. (715) 823-6744.

ATIONAL TYPE PSK PRESELECTOR FOR
NATIONAL FB7-A RCVR. SW3, FB7
COILS. NATIONAL VELVET-B POWER
SUPPLY. PAT STEWART, W7GVC, 1404
RUTH AVENUE, WALLA WALLA, WA 99362.

TUBE SOCKETS— 3-4-5-6 PRONG
COMPOSITE. 2-5-6-7 PRONG COMPOSITE.
1-5-7 PRONG COMPOSITE. 4-7-7 PRONG
COMPOSITE. JACK S. WALLACE, 5516
GILBOW AVENUE, RIVER OAKS, TX
76114. (817) 732-5189.

OPER-HEWITT MERCURY vapor bulb.
TCBA, RR6, Box 181, Glens Falls, NY
12801

FIXED DETECTOR GRID RESISTANCE FOR
ATWATER KENT MODEL 32 AK PART #
8190, ALSO GRID LEAK RESISTOR, AK
PART #8190. ALSO FOUND IN MODELS
20c- 30- 33- 35. C. Hoffman, 824
Gordon Street, Allentown, PA 18102.
Phone (215) 434-2536.

REPLACEMENT CONE MATERIAL FOR
STROMBERG- CARLSON 601-TRF
COMPANION CONE SPEAKER. LAWRENCE DE
ROSE, 12 WILLS AVENUE, R.D.#1,
STANHOPE, NJ 07874.

MACHINES SCREWS TO HOLD PANEL TO
CABINET, RADIOLA III AND IIIA, I
NEED TWO DOZEN. ERNEST HECKLER,
1314 N. SPARKMAN, HARTSELLE, AL
35640.

WANTED — BATTERY RADIO CHASSIS
AND/OR ANY INFORMATION ON BRUNSWICK
RADIOLA PHONOGRAPH, MODEL BR100,
PATENT 1923 — DICK ROZNOVSKY, BOX
480, RICHFIELD, OH 44286.

WANTED: CABINET & AUDIO TRANS-
FORMERS FOR GREBE CR9, ARTHUR HAR-
RISON, 501 ARBOR DRIVE, COLUMBIA,
MD 65201. (314) 474-8729.

DIAL TUNING KNOB AND RESET LOCK
SCREW FOR A WARDS 62501 TABLE MODEL
RADIO, RIDER 10 - 22, H. F. BRAM-
MELL, 24 E. MAPLE, AMERICUS, KS
66835.

ZENITH DETECTOR COIL NO. S-8436
USED IN CH, 10A1, 10A2, 10B1, 10B2.
ATWATER KENT MODEL 60 A.F. TRANS-
FORMER ASSEMBLY. L49B BALLAST TUBE.
45 RPM SPINDLE FOR BSR C129 CHANGER
EV/GAME 436. CABINET FOR PILOT TV
37. 3KP4 CRT. ELECTRONICS MEASURE-
MENT CORPORATION. MODEL 502 SIGNAL
GENERATOR, ASSEMBLY MANUAL OR
SCHEMATIC. AUDIO INPUT XFMRs FOR
SINGLE PLATE TO P-P GRIDS. ANY
JUNKBOX PARTS, LITERATURE. ANY
EARLY TWO AND THREE PIECE CAR RAD-
IOS, UNITED MOTORS, B.O.P., ETC.
ANY OTHER FACTORY CAR RADIOS FROM
30'S - 40'S. ANY SIGNAL SEEKING
TYPE CAR RADIOS, MUST HAVE KNOBS.
CAR RADIO KNOBS. — ALVIN HECKARD,
RD1, BOX 83, LEWISTOWN, PA 17044.

EARLY OR UNUSUAL TUBES, tube cans,
cartons also early light bulbs pre
1900. Please describe with prices
wanted to: Bruce Harbeck, 13408
Westwood Lane, Omaha, NE 68144.
(402) 333-9013.

HALLDORSON 3 to 1 audio transform-
er, copper casing. hard rubber
panel 10 x 11 x 1/4. Gordon Wilson,
11108 - 50 Avenue, Edmonton, Al-
berta, Canada, T6H 0H9.

DETECTOR and AUDIO PORTION of GREBE
CR2. Also need cabinet for same.
NEED FRONT PANEL FOR SCOTT Phantom
DELUXE. Larry Steeno, 2728 42nd
Street, Two Rivers, WI 54221. (414)
794-7320.

MARCONIPHONE VIII cabinet, also
Marconiphone VI chassis, or com-
plete radios cash, or generous
trade. Gordon Wilson, 11108 - 50
Avenue, Edmonton, Alberta, Canada,
T6H 0H9.

WANTED: EMPTY CABINET for a Philco
model 20 cathedral radio. I already
have the radio and speaker. Must be
in good condition. Joe Beach, 6515
Sunset, Garden City, MI 48135.

WANTED— CABINET AND PARTS FOR A
FEDERAL 61. Mike Kibler, 300
Speiter #39, Danville, IL 61832.

(217) 267-3703.

WESTERN ELECTRIC TYPE 216A vacuum
tube and VT25 or 25A tubes. The
216A must be check in a circuit.
Tod Drogoski, 507 Coal Valley Road,
Clairton, PA 15025.

TUBES: EARLY UV-217, type CA plio-
tron, DeForest DV-1 and DV-6,
adapter for DeForest type T audion
to fit candelbra socket. Parts:
rheostat assembly and knob for
Tuska 224 rcvr.; case w/hardware
for Radiola balanced amplifier. B.
T. Wooters, W5KSO, 8303 E. Mans-
field Avenue, Denver, CO 80237,
(303) 770-5314.

WANTED — PHILCO

PHILCO MODEL 90B, working or not.
Original speaker from Philco model
20— must be in good shape. Thomas
Abell, 1022 S. Edison Ave., South
Bend, IN 46619. Phone (219)
234-8405.

WANTED — PLASTICS

WANTED: CATALIN RADIOS. All makes:
FADA, OSWALD, EMERSON, MOTOROLA,
etc. Top prices paid. R. Wayne
Oliver, 355 Highwood Avenue, Leon-
ia, NJ 07605. (201) 944-0777.

WANTED — SCOTT

WANTED: EH SCOTT, SCOTT transformer
or World's Record radios, sometimes
copper or chrome plated. Especially
looking for Symphony, AC9, Shield
Grid 10B, World's Record Super 9,
Shield Grid 9B, AW13, AW19, AW27,
pointer dial Philharmonic, any
Scott in these cabinets:
Secretaire, Napier, Warwick,
Ravinia Grande, Laureate Grande.
Also want original literature,
especially issues of THE SCOTT
NEWS. Contact me first if you have
anything SCOTT to sell. Jim Clark,
1292 Starboard, Okemos, MI 48864.
(517) 349-2249.

WANTED — SONY

WANTED: OLD SONY radios. Jay Lewin,
400 east 54th Street, New York, NY
10022. (212) 935-5656.

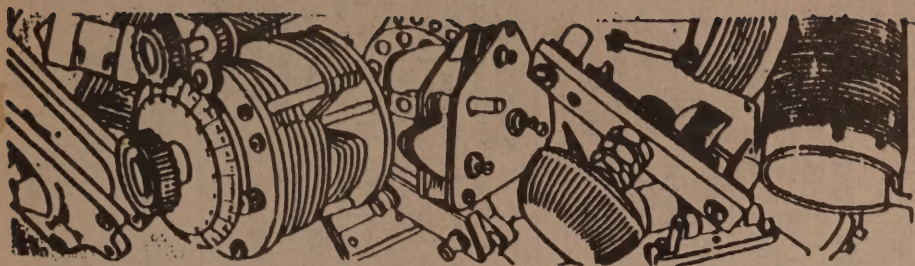
WANTED — ZENITH

ZENITH TRANSISTOR Trans-Oceanic 11
or 12 band radio- parts or com-
plete. Have Rider TV manuals 2 thru
23 for offer. Wade, 657 14th Ave.,
Prospect Park, PA 19076.

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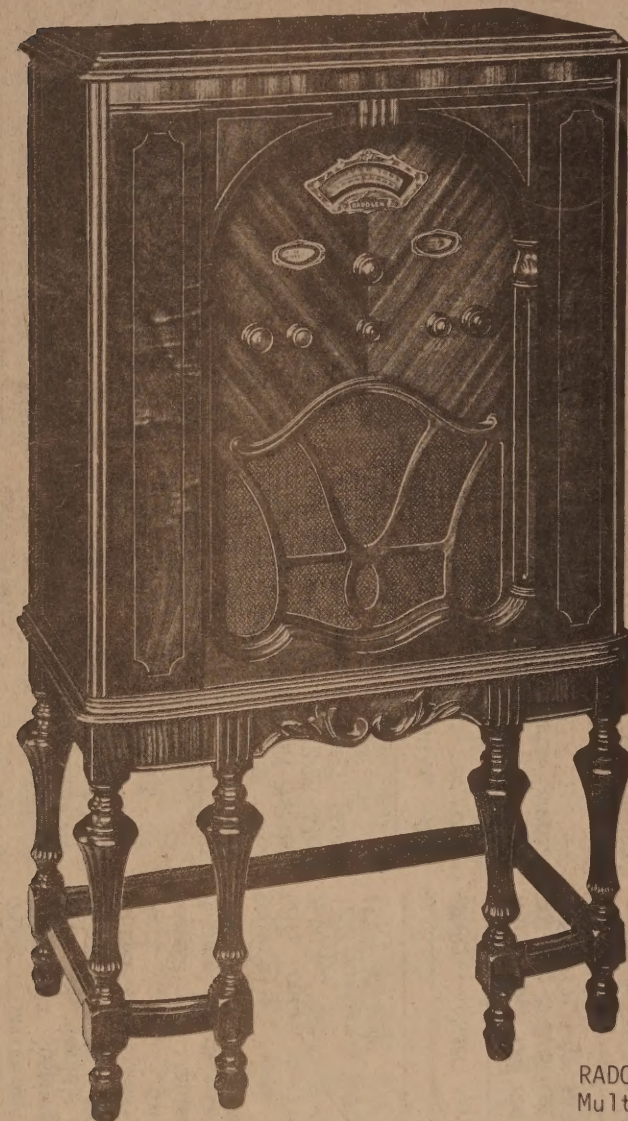
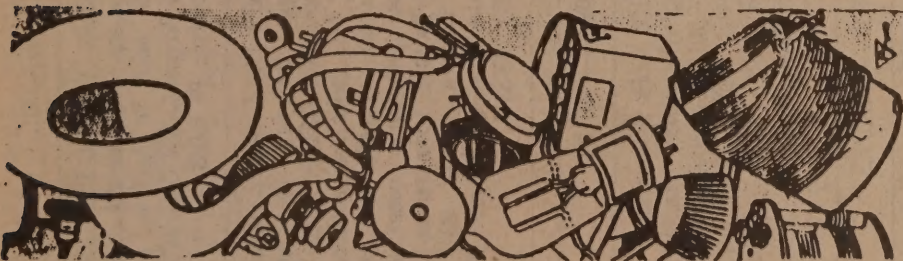
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| * AK Style Battery Cable | * Headphones |
| * Olde Tyme Hookup Wire | * Headphone & Speaker cords |
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